IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

Claims 1-20 (canceled)

21. (currently amended) An enzyme solution comprising (a) an isolated β1,3-N-acetyl-D-galactosamine transferase which transfers N-acetyl-D-galactosamine to N-acetyl-D-glucosamine with β-1,3 linkage and has an amino acid sequence encoded by a nucleotide sequence that can hybridize to the complement of (i) SEQ ID NO:1 from nucleotide 106 to nucleotide 1503 or (ii) SEQ ID NO:3 from nucleotide 103 to nucleotide 1512 under high stringency conditions of hybridizing in 2x SSC and 50% formamide at 40°C and washing in 0.2x SSC and 0.1% SDS at 68°C; ~~sharing at least 90% sequence identity with (i) SEQ ID NO: 2 from amino acid 189 to amino acid 500 or (ii) SEQ ID NO: 4 from amino acid 35 to amino acid 504,~~ (b) buffer with a pH of at least 5.50 to 5.78 in MES buffer, a pH of around 5.0 in sodium cacodylate buffer, or a pH of around 7.4 to 7.5 in HEPES buffer; ~~which is not from 6.2 to 6.6,~~ and (c) divalent metal ion.

Claims 22-24 (canceled)

25. (currently amended) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is encoded by a nucleotide sequence that can hybridize to the complement of SEQ ID NO: 1 from nucleotide 106 to nucleotide 1503 under high stringency conditions of hybridizing ~~hybridizating~~ in 2× SSC and 50% formamide at 40°C and washing in 0.2× SSC and 0.1% SDS at 68°C.

Claim 26 (canceled)

27. (previously presented) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is encoded by a nucleotide sequence that can hybridize to

the complement of SEQ ID NO: 3 from nucleotide 103 to nucleotide 1512 under high stringency conditions of hybridizing in 2× SSC and 50% formamide at 40°C and washing in 0.2× SSC and 0.1% SDS at 68°C.

28. (currently amended) The enzyme solution of claim 21, wherein the pH of the buffer is at least 5.50 to 5.78 in MES buffer ~~from about 5.0 to about 7.5~~.

29. (currently amended) The enzyme solution of claim 21, wherein the pH of the buffer is around 5.0 in sodium cacodylate buffer ~~(i) greater than 5.0 and less than 6.2 or (ii) greater than 6.6 and less than 7.5~~.

30. (previously presented) The enzyme solution of claim 21, wherein the divalent metal ion is Mn^{2+}, Co^{2+}, or Mg^{2+}.

31. (withdrawn) A process of using an enzyme solution of claim 21, wherein the process comprises catalyzing transfer of an N-acetyl-D-galactosamine (GalNAc) residue of a donor substrate to an N-acetyl-D-glucosamine (GlcNAc) residue of an acceptor substrate, wherein linkage between GalNAc and GlcNAc residues is a β1,3 glycosidic linkage, in the enzyme solution.

Claims 32-34 (canceled)

35. (withdrawn) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is encoded by a nucleotide sequence that can hybridize to the complement of SEQ ID NO: 1 from nucleotide 106 to nucleotide 1503 under high stringency conditions of hybridization in 2× SSC and 50% formamide at 40-50°C and washing in 0.2× SSC and 0.1% SDS at 68°C.

Claim 36 (canceled)

37. (withdrawn) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is encoded by a nucleotide sequence that can hybridize to the complement of SEQ ID NO: 3 from nucleotide 103 to nucleotide 1512 under high stringency conditions of hybridization in 2× SSC and 50% formamide at 40-50°C and washing in 0.2× SSC and 0.1% SDS at 68°C.

38. (withdrawn/currently amended) The process according to claim 31, wherein the pH of the buffer is at least 5.50 to 5.78 in MES buffer ~~from about 5.0 to about 7.5~~.

39. (withdrawn/currently amended) The process according to claim 31, wherein the pH of the buffer is around 5.0 in sodium cacodylate buffer ~~(i) greater than 5.0 and less than 6.2 or (ii) greater than 6.6 and less than 7.5~~.

40. (withdrawn) The process according to claim 31, wherein the divalent metal ion is Mn^{2+}, Co^{2+}, or Mg^{2+}.

41. (new) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence shown in SEQ ID NO: 2.

42. (new) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence shown in SEQ ID NO: 4.

43. (new) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence from amino acid 189 to amino acid 500 of SEQ ID NO: 2.

44. (new) The enzyme solution of claim 21, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence from amino acid 35 to amino acid 504 of SEQ ID NO: 4.

45. (new) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence shown in SEQ ID NO: 2.

46. (new) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence shown in SEQ ID NO: 4.

47. (new) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence from amino acid 189 to amino acid 500 of SEQ ID NO: 2.

48. (new) The process according to claim 31, wherein the β1,3-N-acetyl-D-galactosamine transferase is comprised of the amino acid sequence from amino acid 35 to amino acid 504 of SEQ ID NO: 4.